REMARKS

Claims 9-18 are currently pending with claims 9 and 18 being independent. Claims 9-17 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Additionally, all claims 9-18 stand rejected under 35 U.S.C.§112 ¶¶ 1 and 2, as well as 35 U.S.C. §102(b) as being anticipated by Chaporkar (U.S. Pat. App. Pub. No. 2004/0083277). In response, Applicant has amended the claims, without adding new matter, to clarify the language. In light of the amendments and the following remarks, Applicant submits that all pending claims are in condition for allowance.

35 U.S.C. §101 Rejections

The Office Action first alleges that method claims 9-17 are directed to non-statutory subject matter solely because the claims fail to satisfy the "machine-or-transformation" test. Particularly, the Office Action asserts that the steps of the method are "broad enough that the claim could be completely performed mentally, verbally, or without a machine nor is any transformation apparent." *See Office Action*, p. 3, ¶1. However, the test relied upon by the Office to reject the claims is not dispositive for determining eligible subject matter under §101.

The U.S. Supreme Court recently held that "[t]he machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible process." *Bilski v. Kappos*, 561 U.S. ___ (2010). Rather, it is "a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under §101." *Id.* That is, even if a method claim fails to satisfy the machine-or-transformation test, that failure does not mean that the claim is not directed to patentable subject matter under 35 U.S.C. §101.

The Office improperly relies only on the "machine-or-transformation" test to support a §101 rejection of claims 9-17. Therefore, the §101 rejection should be withdrawn for at least this reason. However, there are other reasons the §101 rejection must be withdrawn.

Particularly, the Office Action's characterization of claims 9-17 as being broad enough to be drawn to purely human activity is inaccurate. The claims are directed to a method of reconfiguring a telecommunications transport network after a network resource (e.g., a node or fiber) is added or deleted. *E.g., Spec.*, p. 2, ¶ 2. Network reconfiguration involves calculating how to allocate network resources according to a complex set of predetermined parameters. Given the number and variety of resources available to the network for allocation, the size and dynamic nature of the network(s), and the typical complexity of the parameters that constrain resource allocation decisions, the claimed method undoubtedly requires the use of a computing device and cannot be "completely performed mentally, verbally, or without a machine."

The requirement for such a computing device is inherent in the claims. However, to make explicit what was already implicit, Applicant has amended claim 9, without adding new matter, to recite that the method steps are performed by a network simulator. As described in the specification, the network simulator calculates a routing for the telecommunications network method steps and outputs the results for implementation. *E.g., Spec*, p. 6, ¶ 1.

For at least the foregoing reasons, claims 9-17 are directed to subject matter that is patentable. In light of the amendments and the remarks, Applicant requests that the Examiner withdraw the §101 rejection.

35 U.S.C. §112 ¶1 Rejections

The Office Action next alleges that the specification does not enable claims 9-18. The Office Action specifically asserts that the specification does not reasonably enable the following:

1) comparing the allocation of resources and services on a network with a desired new location;
2) estimating the feasibility of the desired allocation;
3) calculating a feasible allocation which would best approximate the one desired and reorganizing the new routings calculated such as a comparison between an old and a new routing, is to provide a procedure for finding a feasible routing which would be best for using in the routing.

See Office Action, p. 3, ¶4. This rejection is improper and should be withdrawn.

None of these phrases identified by the Office as allegedly lacking enablement are recited in the claims. Rather, these phrases are found in the text of the specification only. *See Spec.*, p. 3, ¶3. In this part of the specification, Applicant simply begins describing the general purpose of the invention. In the pages that follow, however, Applicant provides a more detailed description of the invention "in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the [invention]." 35 U.S.C. §112 ¶1. The Office readily acknowledges that all claims are supported by the specification and fully enabled. "[T]he specification, while *being enabling for a method and system*...." *See Office Action*, p. 3, ¶4 (emphasis added). All claims 9-18 are supported and fully enabled by the detailed specification. It is improper for the Office to reject claims based on wording or phrases that do not appear in the claims.

The Office Action also alleges that the specification does not disclose how to reroute a network because "only packet, frame, [and] message can be rerouted in the network via from old path to new path." *See Office Action*, p, 10, ¶1. However, the Office improperly interprets the claims. The claims and the specification say nothing about the routing of traffic through the network. In contrast, both the claims and the specification unambiguously describe rerouting as a reconfiguration of a telecommunications network, and more specifically, of the circuits in that network. For example, the preamble of claim 9 recites, "[a] method for reconfiguring a telecommunications transport network after addition or removal of a network resource." The claim limitations then recite the process by which one set of circuits in the network (i.e., the communication pathways between two endpoints) are replaced with other circuits to reconfigure the network.

Therefore, the §112 ¶1 rejections should be withdrawn because the Office improperly interprets the claims. Specifically, the Office rejects the claims based on either language that

does not appear in the claims, or on a contrived meaning that never appears in the claims or the specification. Accordingly, the §112 ¶1 rejections of claims 9-18 is improper and should be withdrawn.

35 U.S.C. §112 ¶2 Rejections

The Office Action next indicates that claims 9-18 are indefinite alleging that the terms "circuit" and "circuit movement" used in those claims is vague and indefinite. Applicant notes, however, that the terms "circuit" and "circuit movement" are well known terms of art. Further, both are fully supported in the claims and specification. In the context of the claims and specification, the term "circuit" refers to a connection between two endpoints, such as a pair of nodes. *E.g. Spec.*, p 12, ¶6; p. 13, ¶3. The term "circuit movement" refers to the process by which one set of circuits is replaced with another set of circuits. *E.g., Spec.*, p. 7, ¶1. Given these explicit definitions, and the meanings provided by the specification, the terms "circuit" and "circuit movement" are not vague or indefinite. Rather, they have concrete meanings that are supported in the specification and are completely understood to those in the art. Accordingly, Applicant requests that the Office withdraw the §112 ¶2 rejections of claims 9-18.

35 U.S.C. §102(b) Rejections

Finally, the Office Action indicates that the published application to Chaporkar anticipates claims 9-18. In response, Applicant has amended the independent claims 9 and 18 to better clarify the claimed invention over the cited art. No new matter has been added.

As stated above, claim 9 is directed to a method for reconfiguring a telecommunications transport network after addition or removal of a network resource, such as a node or fiber. Particularly, the claimed invention identifies a sequence of circuit movement steps to reroute (i.e., reconfigure) the transport network from a set of actual circuits to a set of feasible

intermediate circuits. Notably, the set of intermediate circuits are those that best approximate a series of target circuits, and must continue to satisfy the same set of demands that the actual circuits already satisfy.

As amended, claim 9 recites, "identifying, at [a] network simulator, [a] sequence of single circuit movements with which circuits Cl_i were replaced as the series of single circuit movements to re-route the network." Chaporkar does not disclose this limitation.

Chaporkar teaches a method for designing a fast, cost-effective Internet network. In Chaporkar, the method obtains a plurality of router pairs (i.e., source-destination). A first pair is selected, and a minimum capacity for the pair is determined based on a predicted traffic demand on that pair. A differential cost for the link connecting the selected pair is then determined, as is a least-cost path routing for the selected pair. The current capacity and cost of the network are then updated. These steps continue for each link in the path. *E.g., Chaporkar*, ¶[0028].

In the Office Action, the Examiner contends that Chaporkar teaches, "identifying, at [a] network simulator, [a] sequence of single circuit movements with which circuits Cl_i were replaced as the series of single circuit movements to re-route the network." For support, the Examiner cites step 216 of Figure 1 in Chaporkar. However, the corresponding description for this figure evidences the fact that Chaporkar does not support this assertion. According to Chaporkar, step 216 in Figure 1 teaches that for every link on a selected path between a source-destination pair of routers, a current capacity and a current cost data for each link in the network is updated. *Chaporkar*, ¶[0042]. Updating the capacity and cost of the links has nothing whatsoever to do with identifying a sequence of single circuit movements in which the current circuits may be replaced to re-route the network.

Applicant notes that step 220 of Figure 1 discloses determining a lowest cost design. However, this still does not teach the above-cited limitation. While Chaporkar may disclose a

sequence of links from a source node to a destination node when identifying a least-cost path, that sequence defines only a least-cost communications path between the nodes for traffic. It does not disclose a sequence of single circuit movements in which the network can be reconfigured.

The difference between claim 9 and Chaporkar is remarkable. The resultant sequence of single circuit movements (i.e. the sequence of moves for one circuit at a time) as claimed in claim 9 obtains the best order for replacing the circuits while avoiding collisions. *Spec.*, p 7, ¶1. In contrast, Chaporkar obtains a least-cost path with which to traverse the paths between nodes. Indeed, these two concepts are not the same and one does not teach the other.

Therefore, Chaporkar does not disclose, "identifying, at the network simulator, the sequence of single circuit movements with which circuits Cli were replaced as the series of single circuit movements to re-route the network," as claimed in claim 9. Accordingly, Chaporkar fails to anticipate claim 9 or any of its dependent claims.

Claim 18 is the apparatus claim corresponding to claim 9, and stands rejected as being anticipated by Chaporkar for substantially the same reasons as those stated for claim 9. However, claim 18 has also been amended, without adding new matter, to incorporate limitations similar to those of claim 9. Therefore, for reasons similar to those stated above, Chaporkar does not anticipate claim 18.

In light of the foregoing amendments and remarks, all pending claims are in condition for

allowance. Applicant therefore requests that the Office withdraw all rejections and issue a Notice of Allowance.

Respectfully submitted,
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